

Regional HIV/AIDS Epidemiologic Profile of City of Worcester, Massachusetts: 2012

Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases who were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2012, this resulted in the removal of 2,924 HIV/AIDS cases, of which 808 have died and 2,116 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

Table 1. Total number of people reported with HIV infection or AIDS¹ by mortality status on December 31, 2011: City of Worcester, Massachusetts²

	N	%
People Living with HIV/AIDS	940	60%
People Reported with HIV or AIDS who are Deceased	636	40%
Total Number of People Reported with HIV Infection or AIDS	1,576	100%

¹ Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 2. Average annual rate of HIV infection diagnosis from 2008 to 2010 and HIV/AIDS prevalence rate on 12/31/11¹: City of Worcester, Massachusetts²

Average annual HIV diagnosis rate from 2008–2010	Average rate per 100,000	Average annual number of HIV diagnoses
City of Worcester, MA	17.9	32.3
Massachusetts Total	10.3	664.7

HIV/AIDS prevalence rate on 12/31/11	Rate per 100,000	Number of people living with HIV/AIDS
City of Worcester, MA	519.2	1,576
Massachusetts Total	277.5	18,170

¹ The denominators for rate calculations are from the 2010 Census, Summary File 1.

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 3. People living with HIV/AIDS¹, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year²: 2001–2010, City of Worcester, Massachusetts³

Year	HIV/AIDS Prevalence	Deaths among those with HIV/AIDS	Diagnosis of HIV Infection
2001	707	20	38
2002	756	22	72
2003	778	26	48
2004	802	27	51
2005	807	28	31
2006	843	18	53
2007	861	24	42
2008	873	17	29
2009	888	14	29
2010	916	11	39

¹ Number of people living with HIV/AIDS on 12/31 of each year

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 4. People diagnosed with HIV infection from 2008–2010¹ and people living with HIV/AIDS on December 31, 2011 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: City of Worcester, Massachusetts²

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	54	56%	541	58%
Female	43	44%	399	42%
Place of Birth:	N	%	N	%
US	37	38%	498	53%
Puerto Rico/US Dependency ³	20	21%	218	23%
Non-US	40	41%	224	24%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	18	19%	295	31%
Black (non-Hispanic)	44	45%	279	30%
Hispanic/Latino	30	31%	348	37%
Asian/Pacific Islander	5	5%	17	2%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	16	16%	170	18%
Injection Drug Use (IDU)	16	16%	300	32%
MSM/IDU	-- ⁷	-- ⁷	35	4%
Heterosexual Sex	20	21%	198	21%
Other	-- ⁷	-- ⁷	18	2%
Total Undetermined	41	42%	219	23%
• Presumed Heterosexual Sex ⁴	19	20%	111	12%
• Undetermined ⁵	22	23%	108	11%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2011	
Under 13	-- ⁷	-- ⁷	-- ⁷	-- ⁷
13 to 19	-- ⁷	-- ⁷	-- ⁷	-- ⁷
20 to 24	10	10%	17	2%
25 to 29	9	9%	27	3%
30 to 34	8	8%	40	4%
35 to 39	11	11%	77	8%
40 to 44	16	16%	130	14%
45 to 49	18	19%	175	19%
50 to 54	12	12%	206	22%
55 to 59	-- ⁷	-- ⁷	142	15%
60+	6	6%	120	13%
Total⁶	97	100%	940	100%

¹ Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

² Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

³ Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁴ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁵ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁶ Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁷ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 5. People living with HIV/AIDS on December 31, 2011 by gender and race/ethnicity: City of Worcester, Massachusetts¹

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	205	38%	90	23%
Black (non-Hispanic)	137	25%	142	36%
Hispanic/Latino	185	34%	163	41%
Total²	541	100%	399	100%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Total includes Asian/Pacific Islander, American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 6. People living with HIV/AIDS on December 31, 2011 by gender and exposure mode: City of Worcester, Massachusetts¹

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	170	31%	N/A	N/A
Injection drug use (IDU)	185	34%	115	29%
MSM/IDU	35	6%	N/A	N/A
Heterosexual sex	47	9%	151	38%
Other	8	1%	10	3%
Total Undetermined	96	18%	123	31%
• Presumed heterosexual sex ²	N/A	N/A	111	28%
• Undetermined ³	96	18%	12	3%
Total	541	100%	399	100%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Includes female sex with male of unknown HIV status or risk. This category is limited to females.

³ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 7. People diagnosed with HIV infection by gender and year of diagnosis: City of Worcester, Massachusetts¹, 2001–2010²

	Male		Female		Total
	N	%	N	%	
2001	27	71%	11	29%	38
2002	44	61%	28	39%	72
2003	17	35%	31	65%	48
2004	24	47%	27	53%	51
2005	21	68%	10	32%	31
2006	28	53%	25	47%	53
2007	26	62%	16	38%	42
2008	13	45%	16	55%	29
2009	17	59%	12	41%	29
2010	24	62%	15	38%	39

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: City of Worcester, Massachusetts¹, 2001–2010²

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total ³
	N	%	N	%	N	%	N
2001	10	26%	10	26%	15	39%	38
2002	21	29%	27	38%	23	32%	72
2003	12	25%	21	44%	13	27%	48
2004	17	33%	18	35%	16	31%	51
2005	10	32%	12	39%	8	26%	31
2006	8	15%	25	47%	17	32%	53
2007	13	31%	18	43%	10	24%	42
2008	5	17%	11	38%	11	38%	29
2009	7	24%	12	41%	8	28%	29
2010	6	15%	21	54%	11	28%	39

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals, and those of other or undetermined race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: City of Worcester, Massachusetts¹, 2001–2010²

	US		Puerto Rico/ US Dependency ³		Non-US		Total
	N	%	N	%	N	%	N
2001	13	34%	9	24%	16	42%	38
2002	35	49%	13	18%	24	33%	72
2003	18	38%	9	19%	21	44%	48
2004	22	43%	10	20%	19	37%	51
2005	15	48%	7	23%	9	29%	31
2006	19	36%	10	19%	24	45%	53
2007	17	40%	5	12%	20	48%	42
2008	10	34%	9	31%	10	34%	29
2009	14	48%	5	17%	10	34%	29
2010	13	33%	6	15%	20	51%	39

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: City of Worcester, Massachusetts¹, 2001–2010²

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX ³		Undeter- mined ⁴		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2001	5	13%	13	34%	0	0%	8	21%	0	0%	6	16%	6	16%	38
2002	12	17%	18	25%	-- ⁵	-- ⁵	13	18%	-- ⁵	-- ⁵	9	13%	18	25%	72
2003	6	13%	9	19%	-- ⁵	-- ⁵	10	21%	-- ⁵	-- ⁵	14	29%	7	15%	48
2004	8	16%	10	20%	-- ⁵	-- ⁵	15	29%	-- ⁵	-- ⁵	11	22%	5	10%	51
2005	7	23%	12	39%	0	0%	-- ⁵	-- ⁵	0	0%	-- ⁵	-- ⁵	6	19%	31
2006	10	19%	7	13%	-- ⁵	-- ⁵	9	17%	-- ⁵	-- ⁵	15	28%	11	21%	53
2007	15	36%	-- ⁵	-- ⁵	0	0%	6	14%	-- ⁵	-- ⁵	9	21%	8	19%	42
2008	-- ⁵	-- ⁵	8	28%	0	0%	7	24%	-- ⁵	-- ⁵	6	21%	5	17%	29
2009	6	21%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	5	17%	-- ⁵	-- ⁵	5	17%	7	24%	29
2010	8	21%	-- ⁵	-- ⁵	-- ⁵	-- ⁵	8	21%	0	0%	8	21%	10	26%	39

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

³ Includes female sex with male of unknown HIV status or risk. This category is limited to females.

⁴ Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: City of Worcester, Massachusetts¹, 2001–2010²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2001	16	38	42%
2002	25	72	35%
2003	18	48	38%
2004	21	51	41%
2005	10	31	32%
2006	18	53	34%
2007	19	42	45%
2008	14	29	48%
2009	11	29	38%
2010	13	39	33%

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: City of Worcester, Massachusetts,¹ 2008–2010²

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Gender:	N	N	%
Male	25	54	46%
Female	13	43	30%
Race/Ethnicity:	N	N	%
White (non-Hispanic)	8	18	44%
Black (non-Hispanic)	19	44	43%
Hispanic/Latino	8	30	27%
Asian/Pacific Islander	-- ⁵	-- ⁵	-- ⁵
Other/Undetermined ³	-- ⁵	-- ⁵	-- ⁵
Place of Birth:	N	N	%
US	22	15	37
Puerto Rico/US Dependencies ⁴	14	6	20
Non-US	23	17	40
Total	59	38	97

¹ Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

² Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

³ Includes American Indian/Alaska Native, other and unspecified race/ethnicity.

⁴ Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

⁵ Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12